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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,191	11/25/2003	Hun-Suk Yoo	6161.0099.US	4232

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EXAMINER

ROY, SIKHA

ART UNIT PAPER NUMBER

2879

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/720,191

Applicant(s)

YOO ET AL.

Examiner

Sikha Roy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The Response, filed on October 17, 2006 has been entered and acknowledged by the Examiner.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claims 10-20 have been withdrawn.

Claims 1-9 are currently pending in the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3,4,5, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001319583 to Kado et al. and further in view of U.S. Patent 5,985069 to Kawabe et al.

Regarding claim 1 Kado discloses (Figs. 1,7 English translation para [0041], [0052],[0053],[0062]) a plasma display panel comprising a first substrate 10 and a second substrate 20 opposing one another with a predetermined gap there between and a sealant (glass layer) formed on opposing surfaces of the first and second substrates around an outer circumferential area of the first and second substrates to seal them wherein the sealant is formed of regions 62 having a first width of

substantially same size and regions having a second width 64, second width being greater than the first width.

Kado does not explicitly disclose the sealant is formed having substantially uniform thickness.

Kawabe in same field of endeavor discloses (Fig. 1(a) column 6 lines 41-67) the band of the sealing material 3 throughout the generally rectangular frame is of substantially uniform thickness. Kawabe further teaches (column 3 lines 27-39) if the thickness of the sealing material fluctuates or varies reliable sealing cannot be obtained, if the thickness is reduced at one localized position it will permit leakage of the discharge gas and if the thickness is increased it will cause crack or break of one of the substrates.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to form the sealant on the periphery between the two substrates of Kado of uniform thickness as taught by Kawabe so that reliable sealing can be obtained.

Regarding claim 3 Kado discloses in Fig. 7 that plurality of regions of the sealant having second width are formed at pre-determined intervals around the circumferential area of the first and second substrates.

Regarding claim 4 it is clearly evident from Fig. 7 that when moving on one direction along the long axis of the sealant, regions with second width gradually increases in size from regions having first width until reaching the size of the second

width and the width of the sealant gradually decreases in size until it reaches the size of the first width.

Regarding claim 5 Kado discloses (para [0006]) the sealant is a sealing glass frit.

Regarding claim 7 Kado discloses the limitations which are same as those of claim 1 and further discloses (Figs. 3B, 6A) the cross-section of the sealant is band-shaped with a plurality of nodes in glass layer 64.

Regarding claim 8 Kado discloses (Fig. 3B) the nodes 61 are formed at predetermined intervals around the peripheral areas of the first and second substrate.

Regarding claim 9 Kado discloses (column 7 line 45) the sealant is a sealing glass frit.

Claims 2 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001319583 to Kado et al., U.S. Patent 5,985,069 to Kawabe et al. and further in view of U.S. Patent 6,817,917 to Kado et al. (referred as '917).

Regarding claim 2 Kado and Kawabe are silent about regions of sealant having second width being located at area where a sealing pressure is concentrated.

Kado ('917) in same field of endeavor discloses (Fig. 10 column 12 lines 29-51) clamps 50 along the circumference of the first and second substrate 10, 20 are used to hold the substrates 10,20 aligned.

It is well known in the art that sealing clamps mounted along the peripheral region are used for applying a predetermined pressure so as to maintain a combination/attachment state between the first and second substrates. It is noted that the sealing pressure provided by the sealing clamps can be applied more effectively

where the sealing frit mass is more. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the sealing pressure in the regions of the sealant having second width with more sealant than the regions of the first width of Kado and Kawabe for applying predetermined pressure more effectively.

Regarding claim 6 it would have been obvious to specify the locations of the sealing clips of Kado ('917) mounted to the first and second substrates at the regions of the second widths of the sealant of Kado and Kawabe for applying predetermined pressure more effectively between and hence better alignment of the substrates.

Response to Arguments

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment of claims 1 and 7 filed June 6, 2006 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sikha Roy

Sikha Roy
Patent Examiner
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